Civil Action No. 6:11-CV-139 P.R. 4-3 Joint Statement

Defendants' Proposed Constructions and Identification of Intrinsic and Extrinsic Evidence

Defendants do not presently intend to offer expert testimony at the claim construction hearing. However, by this disclosure Defendants do not waive, but rather expressly preserve, the right to offer expert testimony to rebut the testimony of any experts offered by Plaintiff and any extrinsic evidence relied upon those experts.

If necessary to rebut evidence presented by Plaintiff, Defendants may offer the expert testimony of Dr. Robert Morrow on, inter alia, the meaning of the disputed terms and phrases to a person of ordinary skill in the art at the time of the invention of the patent-in-suit; the definition of a person of ordinary skill in the art in this case; and technical background on the invention purportedly claimed or described by the Asserted Patent and any related technology. A curriculum vitae of Dr. Morrow is attached as Exhibit C

U.S. PATENT NO. 7,756,129					
Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence	
Claims: 43, 46, 47, 48, 51, 61, 63, 79, 124-129, 137, 140, 145-147, 156, 221, 224- 226, 229, 257, 302-304, 306, and 334	"MAC Address(es)"	"a device identifier created by the hub device"	See '129 Patent at Figs. 1, 7B, 11, and 12. See Prosecution History of '129 Patent, Office Action Response dated November 25, 2009, at 53-5 (disclosing that "[n]o new matter has been added. These new claims clearly comply with the written description requirement, as evidenced by the table below. Such table provides non-exhaustive examples of support for the subject matter of Claims 498-861 in the originally filed	RAY-BBN- Broadcom-004077, 4114, 4115 (also produced in Azure_00038125- 38188 range); AZURE_00001186- 1188; RAY-BBN- Broadcom-002311- 2312	

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			specification, as published under US Pub. No.: 2007/0274309").		
			"The Hub 110 uses MAC addresses to identify itself and the PEAs 120. The Hub 110 uses its own MAC address to broadcast to all PEAs 120. The Hub 110 might also use MAC addresses to identify virtual PEAs within any one physical PEA 120. The Hub 110 combines a MAC address and a stream number into a token, which it broadcasts to the PEAs 120 to control communication through the network 100. The PEA 120 responds to the Hub 110 if it identifies its own MAC address or the Hub MAC address in the token and if the stream number in the token is active for the MAC address of the PEA 120." '129 Patent at 3:60-4:3.		
			"The LLC 420 provides attachment support by providing attachment opportunities for unattached PEAs to attach to the Hub 110 so that they can communicate, providing MAC address assignment, and initializing an NI 430 and the layers below it for communication with a PEA 120. The LLC 420 provides bandwidth control through token planning. Through the use of tokens, the LLC 420 allocates bandwidth to permit one PEA 120 at a time to communicate with the Hub 110." '129 Patent at 5:30-37.		

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			"FIG. 6 is an exemplary diagram of a data block architecture 600 within the DCL of the Hub 110 and the PEA 120. The data block 600 contains a MAC address 610 designating a receiving or sending PEA 120, a stream number 620 for the communication, and a data buffer 630 which is full when sending and empty when receiving." '129 Patent at 6:44-49.		
			"The LLT 440 partitions the streams into two disjoint subsets, one for use with Hub 110 assigned MAC addresses 750 and the other for use with attaching PEAs' self-selected MAC addresses (AMACs) 760. Both the LLT 440 and the LLD 450 know the size and direction of each stream, but the LLT 450 is responsible for determining how the streams are used, how MAC numbers are assigned and used, and assuring that no two PEAs 120 respond to the same token (containing a MAC address and stream number) transmitted by the Hub 110. One exception to this includes the Hub's use of its MAC address to broadcast its heartbeat 770 (described below) to all PEAs 120." '129 Patent at 7:59-8:3.		
			"During attachment (described in more detail below), the PEA 120 may have two additional active MAC addresses 610, the one it selected for		

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			attachment and the one the Hub 110 assigned to the PEA 120." '129 Patent at 9:13-16.			
			"The PEA 120 writes the MAC address 610 and stream number 620 it received in the token 640 from the Hub 110 into the data block [step 926]." '129 Patent at 99:27-29.			
			"The Hub 110 needs to arrange in advance for receiving data from PEAs 120 by populating the MAC address 610 and stream number 620 into data blocks with empty data buffers 630, because the Hub 110 generates the tokens for receiving data as well as for transmitting data." '129 Patent at 9:42-46.			
			"The Hub 110 communicates with only attached PEAs 120 that have an assigned MAC address 610." '129 Patent at 10:45-46.			
			"Periodically, the Hub 110 schedules attachment opportunities for unattached PEAs that wish to attach to the Hub 110, using a small set of attach MAC (AMAC) addresses and a small set of streams dedicated to this purpose." '129 Patent at 10:48-52.			
			"The Hub 110 then assigns a MAC address to the PEA 120, sending the address to the PEA 120			

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		Construction	using its AMAC address." '129 Patent at 11:2-4. "This MAC address remains assigned to that PEA 120 for the duration of the time that the PEA 120 is attached." '129 Patent at 11:14-16. "The Hub 110 confirms receipt of the MAC address by scheduling the reading of a small, possibly forward error-corrected, attach-confirmation from the PEA 120 at its new MAC address 610. The Hub 110 follows this by sending a small, possibly forward error-corrected, confirmation to the PEA 120 at its MAC address so that the PEA 120 knows it is attached. The PEA 120 returns a final small, possibly forward error-corrected, confirmation acknowledgement to the Hub 110 so that the Hub 110, which is in control of all scheduled activity, has full knowledge of the state of the PEA 120. This MAC address remains assigned to that PEA 120 for the duration of the time that the PEA 120 is attached." '129 Patent at 11:5-16 "When the Hub 110 successfully receives the attach-request from the PEA, it assigns a MAC address to the PEA [step 1140]. In some cases, the Hub 110 chooses the MAC address from the set of AMAC addresses." '129 Patent at 11:50-54.		

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			"The Hub 110 sends the new MAC address 610 in an attach-assignment message to the nowidentified PEA 120, still using the PEA's AMAC address 610 and a stream number 620 reserved for this purpose. The Hub 110 schedules and listens for an attach-confirmation response from the PEA 120 using the newly assigned MAC address 610 [step 1150]." '129 Patent at 11:55-60.		
			attach-assignment with an assigned MAC address from the Hub 110 [step 1240]. Upon receiving the attach-assignment, the PEA 120 finds its Hub-assigned MAC address and tells its driver to use this MAC address to send an attach-confirmation to the Hub 110 to acknowledge receipt of its new MAC address [step 1250], activate all attached-PEA streams for its new MAC address, and deactivate the streams associated with its AMAC address. The PEA 120 waits for an attach confirmation from the Hub 110 using the new MAC address [step 1260] and, upon receiving it, sends a final acknowledgment to the Hub 110 [step 1270]. The PEA 120 then tells its NI 430 that it is attached." '129 Patent at 12:22-35.		

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Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence		
Claims 14, 27, 58, 81, 236, and 259.	"availability of the hub device for peripheral device attachment"	"availability of an identified hub device for attachment to any peripheral device"	See Application Serial No. 10/894,406, Office Action Response date May, 4, 2005 (disclosing support for claims in the specification as filed). See, e.g., id at 11. See '129 Patent at Figs. 7B and 11. "The Hub 110 uses MAC addresses to identify itself and the PEAs 120. The Hub 110 uses its own MAC address to broadcast to all PEAs 120." '129 Patent at 3:60-62. "The LLC [Link Layer Control] 420 provides attachment support by providing attachment opportunities for unattached PEAs to attach to the Hub 110 so that they can communicate, providing MAC address assignment, and initializing an NI 430 and the layers below it for communication with a PEA 120." '129 Patent at 5:30-34. "[T]he LLT 450 is responsible for determining how the streams are used, how MAC numbers are assigned and used, and assuring that no two PEAs 120 respond to the same token (containing a MAC address and stream number) transmitted by the Hub 110. One exception to this includes the Hub's use of its MAC address to broadcast its heartbeat 770 (described below) to all PEAs	AZURE_00001187- 1188; RAY-BBN- Broadcom-002311		

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Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence		
			"Each token 640 (FIG. 6) transmitted by the Hub 110 in a token broadcast 820 includes a MAC address 610 (FIG. 6) and a stream number 620 for the data buffer 630 transfer that follows. The MAC address 610 and stream number 620 in the token 640 together specify a particular PEA 120 to transmit or receive data, or, in the case of the Hub's MAC address 610, specify no, many, or all PEAs to receive data from the Hub 110 (depending on the stream number)." '129 Patent at 8:15-22. "All PEAs 120 listen for the Hub heartbeat that the Hub 110 broadcasts with a token containing the Hub's MAC address 610 and the heartbeat stream 770." '129 Patent at 9:11-13. "The Hub 110 communicates with only attached PEAs 120 that have an assigned MAC address 610. An unattached PEA can attach to the Hub 110 when the Hub 110 gives it an opportunity to do so. Periodically, the Hub 110 schedules attachment opportunities for unattached PEAs that wish to attach to the Hub 110, using a small set of attach MAC (AMAC) addresses and a small set of streams dedicated to this purpose." '129 Patent at 10:45-52.			

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Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence	
			"The Hub 110 periodically broadcasts heartbeats containing a Hub identifier (selecting a new heartbeat identifier value each time it reboots) and an indicator of the range of AMACs that can be selected from for the following attach opportunity [step 1110] (FIG. 11). The Hub 110 schedules an attach-interest via a token that schedules a small PEA-to-Hub transmission for each of the designated AMACs, so unattached PEAs may request attachment." '129 Patent at 11:22-29. "The Hub 110 then listens for a valid attachinterest from an unattached PEA [step 1120]." '129 Patent at 11:40-41.		
Claims: 14 and 27	"availability of the first peripheral device for communication with the hub device" / "availability of the peripheral device for communication with the hub device"	"availability of the [first] peripheral device for communication with the hub device in step (i)"	"After selecting one of the designated AMAC addresses 610 at random to identify itself and preparing to send a small, possibly forward error-corrected, 'attach-interest' message and a longer, possibly checksummed, 'attach-request' message using this AMAC and the proper attach stream numbers 620, the PEA 120 waits for the Hub 110 to successfully read the attach-interest and then the attach-request messages. Reading of a valid attach-interest message by the Hub 110 causes the Hub 110 believe that there is a PEA 120 ready to send the longer (and hence more likely corrupted) attach-request." '129 Patent at 10:53-	RAY-BBN- Broadcom-004077, 4114, 4115 (also produced in Azure_00038125- 38188 range); AZURE_00001187- 1188.	

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Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence	
			"The Hub 110 periodically broadcasts heartbeats containing a Hub identifier (selecting a new heartbeat identifier value each time it reboots) and an indicator of the range of AMACs that can be selected from for the following attach opportunity [step 1110] (FIG. 11). The Hub 110 schedules an attach-interest via a token that schedules a small PEA-to-Hub transmission for each of the designated AMACs, so unattached PEAs may request attachment. Each attaching PEA 120 selects a new AMAC at random from the indicated range when it hears the heartbeat." '129 Patent at 11:22-31. "Each attaching PEA 120 selects a new AMAC at random from the indicated range when it hears the heartbeat. Because the Hub 110 may receive a garbled transmission whenever more than one PEA 120 transmits, the Hub 110 occasionally indicates a large AMAC range (especially after rebooting) so that at least one of a number of PEAs 120 may select a unique AMAC 610 and become attached. When no PEAs 120 have attached for some period of time, however, the Hub 110 may select a small range of AMACs 610 to reduce attachment overhead, assuming that PEAs 120 will arrive in its vicinity in at most		

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			small groups. The Hub 110 then listens for a valid attach-interest from an unattached PEA [step 1120]. The attach-interest is a PEA-to-Hub message having the AMAC address 610 selected by the unattached PEA 120. Upon receiving a valid attach interest, the Hub 110 schedules a PEA-to-Hub attach-request token with the PEA's AMAC 610 and reads the PEA's attach-request [step 1130]. Due to the low-power wireless environment of the PAN 100, the attach-request transmission may take more than one attempt and hence may require scheduling the PEA-to-Hub attach-request token more than once. When the Hub 110 successfully receives the attach-request from the PEA, it assigns a MAC address to the PEA [step 1140]. In some cases, the Hub 110 chooses the MAC address from the set of AMAC addresses." '129 Patent at 11:30-54. "The PEA 120 then selects a random AMAC address from the range indicated in the heartbeat to identify itself to the Hub 110 [step 1220]. The PEA 120 instructs its DCL 460 to send an attach-interest and an attach-request data block to the Hub 110, and activate and associate the streams with its AMAC address [step 1230]." '129 Patent at 12:14-19.			

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Claims: 262 and 263	"Reattachment"	"initiating attachment after detachment caused by exceeding a predefined threshold"	"FIG. 13 is a flowchart of PEA detachment and reattachment processing consistent with the present invention. Each attached PEA 120 listens for Hub heartbeat and keep-alive messages [step 1310]. When the PEA 120 first attaches, and after receiving each keep-alive message, it resets its heartbeat counter to zero [step 1320]. Each time the PEA 120 hears a heartbeat, it increments the heartbeat counter [step 1330]. If the heartbeat counter exceeds a predefined threshold, the PEA 120 automatically assumes that the Hub 110 has detached it from the network 100 [step 1340]. After this happens, the PEA 120 attempts to reattach to the Hub 110 [step 1350], using attachment processing similar to that described with respect to FIGS. 11 and 12." '129 Patent at 12:62-13:7.		
Claims: 45, 46, 223, and 224	"Virtual Entities"	Indefinite	"The Hub 110 might also use MAC addresses to identify virtual PEAs within any one physical PEA 120." '129 Patent at 3:62-64.		
Claims: 55 and 233	"controlling retransmission"	Plain and Ordinary Meaning	"The LLT 440 transmits the snippet across the network to the receiving device. To accomplish this, the LLT 440 adds header information (to indicate, for example, how many bytes in the snippet are padded bytes) and error checking		

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			information to the snippet, and employs reverse-direction status/acknowledgment messages and retransmissions. This is illustrated in FIG. 5 by the bidirectional arrow between the LLT 440 layers marked with "(n+m)." The number n of snippet transmissions and the number m of status transmissions in the reverse direction are mostly a function of the amount of noise in the wireless communication, which may be highly variable. The LLT 440 may also encrypt portions or all of the snippet using known encryption technology." '129 Patent at 6:14-31. "The Hub LLT 440 employs FEC for status, checksums and error checking for snippets, and performs retransmission control for both to ensure that each snippet is delivered reliably to its client (e.g., PEA LLT 440)." '129 Patent at 6:62-35.		
Claims: 43 / 221	"capable of being used for identification in association with the first peripheral device" / "capable of being used for identification in association	Indefinite	See Prosecution History of '129 Patent, Office Action Response dated November 25, 2009, at 53-5 (disclosing that "[n]o new matter has been added. These new claims clearly comply with the written description requirement, as evidenced by the table below. Such table provides non-exhaustive examples of support for the subject matter of Claims 498-861 in the originally filed specification, as published under US Pub. No.:		

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Claim(s)	Claim Term	Proposed Construction	Intrinsic Evidence	Extrinsic Evidence
	therewith"		2007/0274309"). See '129 Patent at Figs. 1 and 7B. "The Hub 110 uses MAC addresses to identify itself and the PEAs 120. The Hub 110 uses its own MAC address to broadcast to all PEAs 120. The Hub 110 might also use MAC addresses to identify virtual PEAs within any one physical PEA 120. The Hub 110 combines a MAC address and a stream number into a token, which it broadcasts to the PEAs 120 to control communication through the network 100. The PEA 120 responds to the Hub 110 if it identifies its own MAC address or the Hub MAC address in the token and if the stream number in the token is active for the MAC address of the PEA 120." '129 Patent at 3:60-4:3.	
			"The LLT 440 partitions the streams into two disjoint subsets, one for use with Hub 110 assigned MAC addresses 750 and the other for use with attaching PEAs' self-selected MAC addresses (AMACs) 760. Both the LLT 440 and the LLD 450 know the size and direction of each stream, but the LLT 450 is responsible for determining how the streams are used, how MAC numbers are assigned and used, and assuring that no two PEAs 120 respond to the same token	

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			(containing a MAC address and stream number) transmitted by the Hub 110. One exception to this includes the Hub's use of its MAC address to broadcast its heartbeat 770 (described below) to all PEAs 120." '129 Patent at 7:59-8:3.	
Claim: 63	"Separate class of MAC address"	"MAC address with a different configuration"	"All PEAs 120 listen for the Hub heartbeat that the Hub 110 broadcasts with a token containing the Hub's MAC address 610 and the heartbeat stream 770. During attachment (described in more detail below), the PEA 120 may have two additional active MAC addresses 610, the one it selected for attachment and the one the Hub 110 assigned to the PEA 120. The streams are partitioned between these three classes of MAC addresses 610, so the PEA 120 may occasionally find that the token 640 contains a MAC address 610 that the PEA 120 supports, but that the stream number 620 in the token 640 is not one that the PEA 120 supports for this MAC address 610. In this case, the PEA 120 sleeps through the next data transfer 830 in the TDMA plan [step 924]." '129 Patent at 9:11-23.	
Claims: 81, 95, and 259	"Additional Identifiers"	Indefinite	"14. A hub device for use within a personal area network, comprising: circuitry, and a transceiver in communication with the circuitry, the hub device configured to cause the transceiver to i) send a message to indicate the availability of the hub device for peripheral device attachment, ii)	

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			receive, from a first peripheral device, a message indicating the availability of the first peripheral device for communication with the hub device, iii) send, to the first peripheral device, a signal including a first peripheral device identifier, iv) receive, from the first peripheral device, a response, v) send a hub response to the first peripheral device, and vi) receive, from the first peripheral device, a second peripheral response including the first peripheral device identifier." '129 Patent at Claim 14. "66. The hub device according to claim 43 [which in turn depends on claim 14], wherein the hub device is configured to cause the transceiver to send one or more additional identifiers to the first peripheral device, wherein the one or more identifiers is used to further identify communications between the hub device and the first peripheral device." '129 Patent at Claim 66. "95. The hub device according to claim 43 [which in turn depends on claim 14], wherein the hub device is configured to cause the transceiver	
			to communicate between the hub device and the first peripheral device, utilizing one or more additional identifiers." '129 Patent at Claim 95	